

NOTE ON THE GEOGRAPHICAL DISTRIBUTION OF *GEOMALACUS MACULOSUS*, ALLMAN, IN IRELAND.

By R. F. Scharff, Ph.D., B.Sc.

Read June 9th, 1893.

CAREFUL descriptions of *Geomalacus maculosus*—one of the most interesting of British terrestrial Invertebrates—have already been published, but as only very few naturalists have seen the species in its native habitat, a few remarks on its peculiar geographical distribution may be of interest.

This slug was first discovered in the autumn of 1842 in county Kerry, by the late William Andrews, of Dublin, and was exhibited at a meeting of the Dublin Natural History Society—a society which has since ceased to exist.

The only definitely known locality in the British Islands for *Geomalacus maculosus* has hitherto been the neighbourhood of Lough Caragh about 20 miles from Killarney, but Mr. Andrews is said to have found it also on an island in Dingle Bay. A fact worthy of mention is that this is also the only spot in Ireland where the Natterjack Toad (*Bufo calamita*) has been taken, and careful search in other places has hitherto proved unsuccessful in discovering this Batrachian. In other respects the whole of the south-west corner of Ireland shows a great sameness in the fauna and flora, both of which are decidedly scanty as regards number of species, but the striking Lusitanian affinities of some of the plants led the late Prof. E. Forbes to the conclusion that a pre-Glacial direct land-connection had existed between Spain and that part of Ireland.¹ In spite of the extreme glacialists who hold that there was ice thousands of feet thick on these parts of Ireland, I agree with Prof. Forbes in the belief that the fauna and flora is of pre-Glacial origin and that they survived the last glacial period on this spot where they once flourished. The presence of these relics of a moister and probably warmer time may be better explained and in a manner more in conformity with geological evidences, by the supposition that they migrated across the south-west corner of England at a period when Ireland was connected with England and the continent of Europe by land, which to some extent may have corresponded with the submarine 100-fathom plateau stretching along the south-western coasts of the British Islands.

A gradual extinction of this Lusitanian Flora is going on at the present day. The groves of the strawberry tree (*Arbutus unedo*) existing a couple of hundred years ago have dwindled down to a few stunted and wretched specimens which may still be seen near the upper Lake of Killarney, and at Glengariff, whilst other plants, like the Killarney fern (*Trichomanes radicans*), are rapidly disappearing. It may be supposed that *Geomalacus maculosus*, which has only been found in Portugal besides the locality mentioned,² migrated to Ireland along

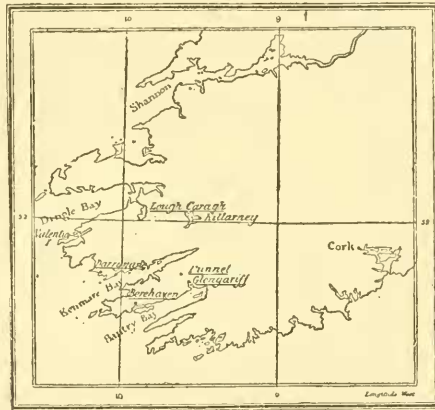
¹ Mem. Geol. Surv. i. p. 347.

² It has lately been taken in N.E. France.—Ed.

with these plants in pre-Glacial times, and has there maintained itself chiefly owing to the abundance and luxuriousness of the lichens and liverworts which cover the rocks, in the fissures of which the slug remains secluded during dry weather.

In a recent paper on the slugs of Ireland,¹ I have drawn attention to the remarkable instance of protective colouring which is seen in *Geomalacus maculosus*, as it rests among the lichens. Its natural food seems to consist chiefly of these and of liverworts, one of the commonest species of the latter being *Frullania dilatata*.

But to return to the actual distribution of the species in Ireland. I have discovered it during the past few years in a number of places which I have indicated by underlining the names of the places on the accompanying map.



I found it south of Valentia Island in the extreme west of Ireland at Darrynane from sea-level up to an elevation of 1000 feet, and still further south at Castletown, Berhaven. At the Tunnel on the Kenmare and Glengariff road it was first discovered by Mr. Scully at a height of 1000 feet above sea-level, while at Glengariff itself it occurs down to the water's edge, and this is the locality where it may be obtained in quantity within easy reach of one of the most delightful summer resorts in the British Islands.

¹ Sci. Trans. R. Dublin Soc. iv. pp. 513-62.